Feed the Future Innovation Lab
For *Collaborative Research on Nutrition* - Asia
Johns Hopkins Bloomberg - Annual Report - Year 4

Feed the Future Innovation Lab

For Collaborative Research on Global Nutrition

Annual Report
Johns Hopkins Bloomberg School of Public Health (JHSPH)
Year 4 (2013-2014)
CORE & RFA Activities: Nutrition Innovation Lab-Asia

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JHSPH Technical Advisory Committee Members: Dr. Rolf Klemm & Dr. Keith West

List of Countries JHSPH operates in: Nepal

Program/ In-Country Partners in Nepal:

1) Nepali Technical Assistance Group (NTAG)
2) New ERA Pvt. Ltd.
3) Nepal Agriculture Research Council (NARC)
4) Community Medicine and Public Health Department, Institute of Medicine (IOM)
5) Helen Keller International (HKI)
6) Nepal Nutrition Intervention Project-Sarlahi (NNIPS)
7) Child Health Division, Department of Health Services, MoHP

Overall Objective:

To build capacity and conduct research to evaluate agricultural and nutritional interventions whose delivery and integration may help communities and households be more food secure, better nourished and healthier early and later in life.

I) Program Activities and Highlights

Fiscal Year 2013-2014 was focused on the conduct of the second panel and first rounds of seasonal data collection, analysis of data from the first panel round, setup and establishment of sentinel site teams.

II) Key Accomplishments

- Trained 90+ data collectors, quality control and research assistant staff to conduct the second annual panel survey in 21 districts, April 2014.

- Completed data collection for the second annual panel assessment in 21 districts (approximately 5408 households interviewed), May-August 2014.

- Completed data entry for the first annual panel survey, development of a master database using the SQL server in Kathmandu to house PoSHAN data, analytic datasets created and shared among co-investigators for data analysis, October-November 2013.

- Completed data collection for the two rounds of seasonal sentinel site assessments in three districts in September-October 2013 and January-February 2014. (Approximately 552 and 499 households in sentinel seasonal Round I and Round II, respectively.)

- Completed data cleaning and entry of the data collected from the two rounds of seasonal sentinel site assessments. Seasonal Round I: November-December 2013; Seasonal Round II: March-April 2014.

- Completed analysis and drafted papers utilizing the first panel survey data:
    1. Undernutrition among Preschool-Aged Children in Nepal: A Nationally Representative Assessment;
    2. Feeding Practices among Children Less than Two Years of Age in Nepal;
    3. Maternal Diet and Dietary Diversity across Agro-Ecological Zones in Nepal;
    4. Nutritional Status of Women of Reproductive Age in Nepal: Findings from a National and Sentinel Site System in Nepal;
    5. A National Surveillance and Sentinel Site System to Assess and Monitor Agriculture-to-Nutrition Pathways in Nepal: Design and Methods;
    6. Baseline Report of Panel 1 PoSHAN Community Studies;

7. The Quality of a Woman's Diet but not Her Nutritional Status are Associated with Household Food Insecurity in Rural Nepal;
8. Morbidity Burden of Women in Nepal from the Three Agro-Ecological Zones;
9. Household Income and Female Empowerment as Determinants of Household Food Expenditure in Nepal; and
10. Influence of Household Crop Diversity on Women's Dietary Diversity in Nepal.

- Provided technical input for the development of national-level policies/strategies supporting maternal and child nutrition and; guest lectures at national academic institutions.

III) Research Program Overview and Structure: PoSHAN Community Studies

Improved agriculture can affect processes that lead to food security, adequate dietary intake and nutritional status, and health. Yet, limited empirical evidence exists on the kinds of actions in agriculture that support nutrition and health for poor populations. There is a need to better understand, measure and classify these connected pathways, and to address their modifiable components in order to reduce food insecurity and undernutrition in high-risk populations, and guide programs and policies which seek to improve nutrition through agriculture. The PoSHAN Community Studies' goal is to assess and monitor household food security, dietary intake and nutritional status of preschool-aged children and their mothers with measures of agricultural diversity, local market food prices and exposure to agricultural and microeconomic extension, nutrition and health programs in Nepal.

The PoSHAN Community Studies was conceptualized and designed by JHSPH with co-Principal Investigators (PIs) from NARC and IOM and the study has been fielded by New ERA Pvt. Ltd and NTAG. Data housing, management and analysis is overseen and conducted by JHSPH.

Collaborators: New ERA Pvt. Ltd, NTAG, NNIPS, IOM, NARC, Government of Nepal (Child Health Division, Dept of Health Services); all partners are from Nepal.

Achievements founded on proposed and actual activities based on Year 4 Work Plans and Lessons Learned

Section 1: Research Activities

Objective 1. Conduct data collection in identified sentinel sites to provide seasonal and detailed information about agriculture-program-household dynamics that may affect diet and nutritional status of families.	
PROPOSED	**ACTUAL**
• Set up three sentinel site offices.	• Fully functional and operating field offices have been set up and are running in Jumla, Arghakhanchi and Banke.
• Secure transportation for data collection teams in sentinel sites.	• Based on the needs of the study sites, transportation was secured: bicycles for Banke, porters for Arghakanchi porters and no transportation for Jumla.
• Conduct two rounds of seasonal data collection in selected surveillance sites.	• Completed in September-October 2013 and January-February 2014, respectively
• Initiate and complete data cleaning, checking and entry process.	• Sentinel site data from Rounds I & II have been cleaned, entered and stored on main SQL server database.
• Conduct analysis for annual panel survey (2013) and seasonal data collection periods (September-October 2013 and January-February 2014), linking data for further analysis.	• Baseline data has been analyzed and a baseline report created for the first annual panel data. Both descriptive and further analyses have been conducted.
• Commence paper writing for analysis conducted on data collected during the first year of data collection (May 2014).	• Based on the analyses conducted, results have either been drafted into publications and/or into presentations shared at meetings and international conferences.
• Conduct qualitative study on determining reasons for program participation and uptake.	• Not completed.
Lessons Learned • Transportation needs varied from site to site. In Banke, based on the terrain and preference of the staff, bicycles were purchased. In Arghakanchi, study wards are spread far apart scattered amongst the hills and at a distance from the field office. Thus,	

it was decided that during data collection, porters were the most efficient and useful aides for transporting anthropometry equipment through the hills. In Jumla, due to the terrain and the proximity of the wards from the VDC headquarters where the office is located and the teams reside, no transportation was required to be purchased.

- Transportation from Kathmandu to sentinel sites can be expensive, especially to Arghakanchi (on average USD 100/day for a car and driver, not including fuel costs) and the project would benefit from its own vehicle.

- There continues to be a need to engage and secure district-level officials' buy-in to the research to ensure that support is provided to the research project as a whole and the community-based field teams. This is especially important as we continually visit communities for data collection. Over time, this could result in interviewee fatigue especially since this is not a trial providing an intervention.

- Real-time supervision quality control checks conducted by field supervisors would improve timely feedback to supervisors and enumerators especially during the short data collection periods for seasonal rounds.

- Tokens may need to be rethought to provide a different token of appreciation to respondents, perhaps something longer lasting than soap, toothbrushes and toothpaste.

- There is a need to keep up regular team-building activities to ensure a sense of cohesiveness within and between the sentinel site teams but also with the Kathmandu central office.

- Certain qualitative studies would benefit both national and global audiences, specifically understanding the difference between adopters versus non-adopters of agricultural technologies, improved practices as well as optimal health and nutrition behaviors. However, to conduct this qualitative study, further analyses of the first annual panel survey data had to be completed in order to inform such a study.

Solutions/Resolutions

- Transportation for the sites was secured based on need. A USAID vehicle has been available to the Kathmandu central office for transfer without expense. A request has been forwarded to the Management Entity (ME) to secure this vehicle.

- Sentinel site field supervisors regularly touch base with district officials as do the Kathmandu central staff whenever quality control visits or site visits are made to maintain relationships. Dissemination briefs featuring results from the first panel survey have been sent to the district health, agriculture and livestock offices as well as the District Development Committee office. In September 2014, monitoring visits were conducted that were comprised of representatives from the District Health Office and

the Central District Office making field visits to observe how and what type of data is collected by the PoSHAN Community Studies.

- Test the use of mobile technology for quality-control management in the sentinel sites.
- Nail cutters and towels have been purchased for the third round of sentinel site data collection.
- Team-building activities for the sentinel sites were held during the retraining sessions in August 2014. It was necessary for frequent calls to be made by the senior field manager from the Kathmandu central office.
- Analyses of the first panel data to inform a qualitative study of the differences between adopters and non-adopters is currently underway and is slated to be completed in the upcoming Fiscal Year 2014-2015.

*Note: All steps noted above are carried out in collaboration with NTAG.

Objective 2. Conduct second annual panel survey for PoSHAN (Policy and Science for Health, Agriculture and Nutrition) Community Studies

PROPOSED	ACTUAL
• Pretest newly-developed modules to be included in the annual survey instrument.	• Not required, as full modules are not developed. Additional questions were pretested amongst study staff.
• Purchase and complete maintenance of equipment required for annual survey (height boards, Hemocue machines, tape measures, calipers, scales).	• Purchased 44 Shorr Boards and 34 SECA scales for use during the second annual panel survey.
• Develop training manuals, manual of operations and survey implementation plan with New ERA.	• An updated manual of operations, PowerPoints as training aids and a training schedule were developed. In collaboration with New ERA Pvt. Ltd., a survey implementation plan was developed.
• Conduct training for data-collection teams with New ERA.	• 5 weeks training and standardization of 90+ data collectors in collaboration with New ERA.

• Conduct second annual panel survey data collection in 21 PoSHAN Community Studies sites.	• Data collection started in May 2014 for the second annual panel survey in 21 districts of Nepal in the mountains, hills and terai and was completed in August 2014. • Quality assurance visits to all 21 districts completed by Nutrition Innovation Lab/JHU staff and to all districts by New ERA staff.
• Initiate and complete data cleaning, checking and entry process.	• Preliminary data reviewed–frequency distributions completed. • Data currently being entered (August 2014).
• Analyze data from second annual panel survey.	• Planned for October 2014 once data entry is completed by New ERA, transferred to JHU database and analytic datasets prepared. • Analytical plans for the incoming data have been discussed collaboratively between the Tufts and JHU teams.

Lessons Learned

- A mapping of the VDCs would help with identification of households eligible for follow-up in the PoSHAN Community Studies.
- There have been changes in how some of the VDCs that were randomly selected to serve as PoSHAN sites are being characterized–i.e. some of the VDCs are moving from being characterized as a "VDC" to being a "municipality." In addition, some wards are being merged with others, and thus their boundaries are expanding. This includes our sentinel site in the mountains, Mahatgaun in Jumla, which will soon be a "municipality"/urban VDC. These changes have not yet taken effect.
- It was noted that there was an approximate 25% inflation in the number of households interviewed. There are some explanations for this, which include: in-migration within the VDCs bordering India, households splitting and also the fact that we decided to expand our inclusion criteria to revisit children who were eligible for the first annual panel survey this year if they were up to 71 months of age. The total number of households interviewed is still crude and final numbers can be ascertained once data entry and cleaning is completed.

- It was noted by field teams that perhaps having a logistics assistant/porter to help transfer anthropometric materials between households would be more efficient.

- Enumerators reported during debriefing sessions that some respondents requested different tokens of appreciation for participation in the survey.

- For first rounds of panel data collection, New ERA was able to provide height boards, scales and HemoCue machines that they received during the 2011 DHS. However, the equipment is old and some is not functional. (Hence the purchase of anthropometric equipment for this year's panel survey.)

- The partnership shared with New ERA and their data collectors continues to be valuable. However, there was turnover in some of the staff hired through New ERA for this project. There exists a need to have more continuity with staff to allow for less intensive training periods which could then be focused more on community building and innovative quality control measures.

- Overall, the refusal rates for the study still continue to be low. Some households and individuals have been lost to follow up due to seasonal migrations, because they moved away from the study site or because they aged out of the study.

Solutions/Resolutions

- Efforts are being undertaken to utilize GIS technology to map our study sites.

- The JHU team in-country has begun discussions with district level officials to identify the timeline for ward boundary changes and as well as the timeline for redefining VDCs/municipalities to predict how this will affect the PoSHAN Community Studies which may have sample size (an increase) and costs implications.

- Continue working with New ERA to carry out the annual surveys for the PoSHAN Community Studies.

- In conjunction with New ERA, ensure that a plan is developed which allows for the greatest efficiency for enumerators to operate.

- Use Eurotrol to test all of New ERAs and use HemoCue machines to ensure their accuracy/ purchase new machines.

- Ongoing discussions about questionnaires and ensuring community engagement in the research continue. Simple pamphlets with research findings are planned to be developed for distribution to the community during dissemination efforts.

Objective 3. Disseminate findings from PoSHAN Community Studies research conducted by JHSPH to pertinent stakeholders.	
PROPOSED	**ACTUAL**
• Dissemination meeting with key stakeholders (policymakers, program implementers, researchers within national research institutions) for Year 1 findings	• Drafted and published Proceedings from the 2nd Annual Scientific Symposium conducted in Kathmandu, Nepal on August 13-14, 2013. The Proceedings distilled and synthesized findings and key points from the 15 oral and 11 poster presentations that addressed the complex and evolving linkages between agriculture, market dynamics and food storage techniques, other nutrition-sensitive interventions and household food security, health and nutrition outcomes. Digital copies of the Proceedings were made available to all participants as well as to other stakeholders. • Presented "Insights into the linkages between horticulture, diet and nutritional status" from the PoSHAN community studies at the July 9 Horticulture Innovation Lab meeting on "Horticulture: Key Opportunities for Nutrition" in Washington, DC. • Presented a "Brown Bag" talk on "Farm to Fork: Leveraging agriculture for improved health and nutrition in Nepal" at the USAID-funded SPRING project headquarters in Rosslyn, VA on March 12, 2014. • Central level dissemination meeting on baseline findings held on February 18, 2014 at the Child Health Division, Department of Health Services with 25 participants in attendance with representations for the Ministry of Health and Population, Ministry of Agriculture, National Planning Commission, Child Health Division, USAID- Mission, and academia.

	• PowerPoint with a sample of preliminary findings shared with USAID-Mission and Mission Director via Hari Koirala, Senior Nutrition Specialist, on December 20, 2013. • Baseline findings shared with the National Nutrition Group, an organization consisting of implementing partners and donors working on nutrition issues in Nepal, on April 9, 2014. • Presentation on the design and baseline results of the PoSHAN Community Studies at the Innovation Lab Council meeting on March 13, 2014, held in Nepalgunj which included other Innovation Lab scientists, local agricultural scientists and program implementing partners, USAID-Mission staff. • Dissemination meeting of baseline findings and further analyses performed with USAID–Mission. In attendance was the Director of Health, Deputy Director of Health and Nutrition Section staff on August 12, 2014. • Dissemination briefs on the baseline data from Panel I were sent to the district health, agriculture and livestock offices as well as to the District Development Committee office in each of the 21 PoSHAN districts in August 2014. • Meeting held with Suaahara program personnel to review few preliminary findings of Panel I pertinent to the program in September 2014.
• Dissemination meetings with district level officials in sentinel sites.	• Dissemination meetings were held in each of the sentinel sites with representatives from the district health, agriculture and livestock offices as well as the District Development Committee, Local Development Office in September 2014.
• Short research findings briefs provided to PoSHAN community	• Not completed

Lessons Learned

- Dissemination meetings thus far have sparked a great deal of interest and comments from stakeholders. There has been both interest in the cross-sectional findings as a way of getting an up-to-date snapshot of status, dietary patterns, production, market prices, household food security and health/nutrition/agricultural extension worker reach. Much interest has been expressed in reviewing year-to-year differences as ongoing intensification of several health, nutrition and agricultural programs continue. Further, there have been requests for analyses of disaggregated data from certain districts where specific programs exist to provide an illustration of program uptake and nutritional status indicators of women and children. It has been important to explain clearly how to interpret disaggregated data given how the study was designed and the sampling strategies utilized in the PoSHAN study.

Solutions/Resolutions

- Once data from the 2nd Annual Panel survey have been entered and cleaned, analyses will begin on year-to-year differences.
- Ongoing analyses to provide data which is useful to ongoing programs on an as-needed basis with clear interpretation of results presented.
- Three (3) PoSHAN briefs on further analyses conducted on the first annual panel survey data are being drafted by the three JHU MSPH students who are currently working with PoSHAN Community Studies for their practicum.

Objective 4. Identify new research questions that might be addressed using the PoSHAN surveillance site infrastructure, and define, prioritize and identify institutional roles with respect to the analysis and publication of findings from PoSHAN data.

PROPOSED	ACTUAL
• Participate in and prepare for a meeting to update and solicit feedback on the status and progress of the surveillance system, identify ideas for potential nested sub-studies, and plan priority analyses and publications	• Participated in three analytic priorities with Tufts University and other collaborating partners (Harvard and Purdue) on December 20, 2013 (conference call), April 22 & 23, 2014 (meeting held at JHSPH), and on August 1, 2014 (conference call). • Dr. William Masters of Tufts University has been engaged and is working in collaboration with JHU to provide input on the creation of household economics and production variables. • Preliminary discussions with Dr. Nanda

	Nanthakumar of Virginia Tech have been undertaken to evaluate the potential of collaborating on the gut microbiome study in JHU sentinel sites.
Lessons Learned • There remains a need to keep track of and to maintain contact with alumni of the training programs to engage them on a regular basis–they provide a wealth of knowledge, and in some cases, belong to or are attached to the stakeholder community which we hope to engage in disseminating our research.	
Solutions/Resolutions • A training candidate who currently serves as a public health scientist with the Nutrition Innovation Lab/JHU team has been tasked with conducting regular alumni meetings with previous training candidates. • Ongoing discussions are underway to assess the analytic capabilities and interests of training candidates. Despite not being engaged directly in the data collection for the PoSHAN studies, these candidates may be able to be engaged for the analysis of data from the study.	

Section 2: Capacity Building

Objective 1. Help build capacity to conduct population-based nutrition research.	
PROPOSED	**ACTUAL**
• Conduct quarterly meetings with Nutrition Innovation Lab graduates of previous training sessions and engage them in dissemination activities, training and/or analysis activities of the PoSHAN Community Studies.	• Quarterly meetings have not been conducted, but instead, lines of communication have been maintained via email, telephone calls and meetings (not on a quarterly basis). One training candidate who works with the Child Health Division was an integral part of organizing the dissemination held at the Department of Health Services. • Both training candidates from the Institute of Medicine are engaged in the design of and abstract evaluation for the Scientific Symposium to be held in November 2014. • The Nepali candidate identified and supported by the Nutrition Innovation Lab to pursue a Masters of Public Health has matriculated from the degree program and now serves as a public

	health scientist for Nutrition Innovation Lab research activities. • A NTAG staff member was identified as having training needs in anthropometry, anemia testing and a general need for exposure to community research sites. This staff member visited Sarlahi for one week and was provided training and mentoring by senior field supervisory staff. • A lecture on "Nutrition Surveillance and Nutrition Program Monitoring and Evaluation" was given to the MPH class at the Institute of Medicine, Tribhuvan University, Kathmandu, Nepal on August 12, 2014.

Lessons Learned

- There remains a need to keep track of and stay in contact with alumni of the training programs to engage them on a regular basis–they are a wealth of knowledge- and, in some cases, belong to or are attached to the stakeholder community which we hope to engage in disseminating our research.

- There exists a limited pool of public health nutrition researchers in Nepal who can provide technical input to ongoing research activities in the country.

Solutions/Resolutions

- A training candidate who currently serves as a public health scientist with the Nutrition Innovation Lab/JHU team has been tasked with conducting regular alumni meetings with previous training candidates.

- Ongoing discussions are being held to assess the analytic capabilities and interests of training candidates. Despite not being engaged directly in the data collection for the PoSHAN studies it might be possible to engage these candidates for the analysis of data from the study.

- Based upon the popularity of the Scientific Symposium, funds were secured from the USAID-Mission to conduct the 3rd Annual Scientific Symposium–to be held November 18, 19, and 20. The last day will focus on a student session and a "What is Evidence?" workshop (organized by Tufts University).

- Provide technical input (especially with regard to sampling and data to be collected) to the National Nutrition Surveillance Working Group which is focused on the creation of a national nutrition surveillance system.

- Contribute to the Maternal Health Sector Strategy Working Group (Monitoring & Evaluation core group).

- Shared PoSHAN questionnaires with RIDA, a research firm focused on Feed the Future monitoring and evaluation activities.

- Shared PoSHAN questionnaires and provided training on how to administer food frequency questionnaires to Helen Keller International who was developing monitoring tools for their Homestead Food Production program

IV) Presentation and Publications:

1. PoSHAN Community Studies Manual of Operations, Updated, Year 2
2. PoSHAN Community Studies Manual of Operations, Sentinel Sites, Year 1 & 2
3. PoSHAN Community Studies Annual Panel Survey (P2) Data Management Plan
4. PoSHAN Community Studies Analytic Database in STATA for sentinel site rounds
5. Shrestha R, Manohar S, Klemm R. Proceedings-Science and Policy for Health, Agriculture, Nutrition & Economic Growth. Nutrition Innovation Lab, December 2013
6. Adhikari R, Bhattarai S, Shrestha R, Manohar S, Klemm R, Gauchan D, West KP, PoSHAN Community Studies: Baseline Summary Findings Brief, August 2014 (Nepali)
7. Manohar S, Klemm R, West KP et al. Baseline Summary Report: 1st Panel Annual Panel Survey 2013: Policy and Science of Health, Agriculture and Nutrition (PoSHAN) Community Studies, August 2014
8. Klemm R. Frameworks for Anemia Programming for Women & Children: Unpacking Causal & Program Pathways. Multisectoral Anemia Partners Meeting, Washington DC
9. Klemm R. "Farm to Fork: Leveraging agriculture for improved health and nutrition in Nepal" at "Brown Bag" session for the USAID-funded SPRING project staff at SPRING headquarters in Rosslyn, VA on March 12, 2014
10. Manohar S, Shrestha R, Rajbhandary R, Klemm RDW, Gauchan D, Adhikari R, Webb P, Ghosh S, West KPW Jr. Risk Factors for Anemia and Undernutrition Across the Agro-Ecological Zones of Nepal. Poster. June 2014. Micronutrient Forum 2014, Ethiopia
11. Klemm R. PoSHAN Community Studies, Nepal—Insights into the linkages between horticulture, diet and nutritional status, Horticulture Innovation Lab's Meeting: Horticulture for Key Opportunities for Nutrition, Washington DC. July 9, 2014
12. Manohar S, Shrestha R, Gauchan D, Adhikari R Klemm R, West Jr, K. Policy & Science for Health, Agriculture and Nutrition (PoSHAN Community Studies), Nepal. Poster. 7th Annual George Graham Lecture & Symposium: "Micronutrients for Life throughout Life."
13. Klemm R, West KP, Manohar S. PoSHAN Community Studies: Finding pathways to accelerate nutritional impacts, Nutrition Innovation Lab: Research on Agriculture, Health and Nutrition International Congress on Nutrition, Sept 15, 2013

V) Human and Institutional Capacity Development

Number (By gender)	Purpose	Home Institution	Training Institution/ Mechanism	Date
Male: 35 Female 5	Provided second year MPH students training on "Nutrition Surveillance, Program Monitoring & Evaluation"	Johns Hopkins University	IOM; Lecture	August 12, 2014.

VI) Other

- Three JHSPH Masters of Public Health students are currently completing practicums with the Nutrition Innovation Lab-Asia and are based in Kathmandu for six months. Erin Biehl and Claire Fitch received funding from the US Borlaug Fellows Program in Global Food Security. The students' fellowship required existing collaborations with local academic/research institutions and they were able to utilize the Nutrition Innovation Lab's collaboration with the Nepal Agricultural Research Council (NARC) for this fellowship. One of their in-country advisors is Dr. Devendra Gauchan, Division Chief of the Socioeconomics and Agricultural Research Policy Division at NARC (also co-PI of the PoSHAN Community Studies).

  The fellows are each conducting key informant interviews: one focused on seeking to identify barriers to cross-disciplinary research in the fields of agriculture and nutrition; and the other on exploring how non-government organizations use academic research to design agriculture and nutrition interventions. For these key informant interviews, the students are working with Manu Magar, a NARC scientist with the biotechnology department, and Padma Pokharel, a second year MSc student in Agricultural Economics at Tribhuvan University who is currently interning with NARC.

  Both students have also undertaken quantitative analyses for the project working on the costs of a typical diet across the agro-ecological zones, expenditure patterns across agro-ecological zones and exploring relationships between household crop diversity and individual women's dietary diversity.

- Jamie Dorsey is funded by the Sight & Life Foundation and is currently conducting analyses on antenatal and postnatal program exposure in women who have been pregnant in the past year and its association to health and nutrition knowledge and practices. She has also been collaborating with Dr. Ramesh Adhikari (co-PI) to develop a qualitative study to understand the 'whys' of health and nutrition program uptake, knowledge and behavior

among women and has also been exploring collaborations with the Suaahara program to undertake the development of a similar qualitative study protocol specific to their program.